



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

January 27, 2023

ANO Site Vice President
Arkansas Nuclear One
Entergy Operations, Inc.
N-TSB-58
1448 S.R. 333
Russellville, AR 72802

SUBJECT: ARKANSAS NUCLEAR ONE, UNIT 1 - AUDIT PLAN TO SUPPORT REVIEW OF LICENSE AMENDMENT REQUEST TO REMOVE TECHNICAL SPECIFICATION CONDITION ALLOWING TWO REACTOR COOLANT PUMP OPERATION (EPID L-2022-LLA-0161)

Dear Sir or Madam:

By letter dated October 31, 2022 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML22304A669), Entergy Operations, Inc. (Entergy, the licensee) submitted a license amendment request (LAR) for Arkansas Nuclear One, Unit 1 (ANO-1). The proposed amendment would revise Technical Specification 3.4.4, "RCS [Reactor Coolant System] Loops – MODES 1 and 2" to eliminate Condition A, which allows one reactor coolant pump in each loop to be out of service for up to 18 hours.

The U.S. Nuclear Regulatory Commission (NRC) staff has reviewed the licensee's LAR and determined that a regulatory audit would assist in the timely completion of the review. The NRC staff will conduct a regulatory audit to support its review in accordance with the enclosed audit plan. A regulatory audit is a planned activity that includes the examination and evaluation of primarily non-docketed information.

The audit will be conducted to increase the NRC staff's understanding of the LAR and identify information that will need to be docketed to support the NRC staff's regulatory findings. The audit will be conducted from February 13, 2023, through March 31, 2023, through an online portal (also known as electronic portal, ePortal, or electronic reading room) established by Entergy. The enclosed audit plan was discussed with your staff on January 24, 2023.

If you have any questions, please contact me at (301) 415-4037 or by e-mail at Thomas.Wengert@nrc.gov.

Sincerely,

/RA/

Thomas J. Wengert, Senior Project Manager
Plant Licensing Branch IV
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-313

Enclosure:
Audit Plan

cc: Listserv

REGULATORY AUDIT PLAN
TO SUPPORT REVIEW OF LICENSE AMENDMENT REQUEST
FOR TECHNICAL SPECIFICATION CHANGES
TO REMOVE TECHNICAL SPECIFICATION CONDITION
ALLOWING TWO REACTOR COOLANT PUMP OPERATION
ENTERGY OPERATIONS, INC.
ARKANSAS NUCLEAR ONE, UNIT 1
DOCKET NO. 50-313

1.0 BACKGROUND

By letter dated October 31, 2022 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML22304A669), Entergy Operations, Inc. (Entergy, the licensee) submitted a license amendment request (LAR) for Arkansas Nuclear One, Unit 1 (ANO-1). The proposed amendment would revise Technical Specification (TS) 3.4.4, "RCS [Reactor Coolant System] Loops – MODES 1 and 2" to eliminate Condition A, "One RCP not in operation in each loop," which allows one reactor coolant pump in each loop to be out of service for up to 18 hours, along with conforming changes in TS 3.4.4.

The U.S. Nuclear Regulatory Commission (NRC) staff has determined the need for a regulatory audit to be conducted in accordance with the Office of Nuclear Reactor Regulation Office Instruction LIC-111, Revision 1, "Regulatory Audits" (ML19226A274), for the NRC staff to examine the licensee's non-docketed information with the intent to gain a better understanding of the LAR, to verify information, and to identify information that may require docketing to support the basis for the NRC staff's licensing decision.

2.0 REGULATORY AUDIT BASIS

ANO-1 was not licensed to the 10 CFR 50, Appendix A, "General Design Criteria [GDC] for Nuclear Power Plants." ANO-1 complies with the "Proposed General Design Criteria for Nuclear Power Plant Construction Permits," published in 1967. The ANO-1 Safety Analysis Report (SAR) provides a comparison with the Atomic Energy Commission (AEC) GDC published as Appendix A to 10 CFR Part 50 in 1971. GDC 10, "Reactor design," of 10 CFR Part 50, Appendix A, states that "[t]he reactor core and associated coolant, control, and protection systems shall be designed with appropriate margin to assure that specified acceptable fuel design limits are not exceeded during any condition of normal operation, including the effects of anticipated operational occurrences." GDC 10 requires that the reactor core and the RCS be designed with the necessary margins to accommodate, without fuel damage, transients that are expected to occur one or more times during the life of the plant.

The NRC staff (i.e., audit team) will perform the audit to support its evaluation of whether the licensee's request to retain the current ANO-1 TS 3.3.1, "Reactor Protection System (RPS) Instrumentation," table 3.3.1-1, "Reactor Protection System Instrumentation," Function 7, which

states that the Reactor Coolant Pump to Power setpoint shall be less than or equal to (\leq) 55 percent (%) rated thermal power (RTP) with one pump operating in each loop while in Modes 1 and 2, will continue to meet the intent of GDC 10.

The licensee stated that the changes would make TS 3.4.4 consistent with NUREG-1430, "Standard Technical Specifications (STS) – Babcock and Wilcox Plants," Revision 5, Volume 1, "Specifications" (ML21272A363). The licensee noted that NUREG-1430, table 3.3.1-1, Function 7, has a bracketed default value of "[5] % RTP with \leq 2 pumps operating," which denotes that this value is site-specific.

The licensee performed an analysis to demonstrate that there would be no adverse effects in retaining the current TS Allowable Value of \leq 55 percent RTP with one pump operating in each loop.

3.0 REGULATORY AUDIT SCOPE AND METHODOLOGY

The audit team will review the licensee's analyses and calculations supporting the proposed TS changes. The audit team will use this review to determine if the licensee needs to submit any additional information contained in the analyses and calculations performed in support of the requested changes to support or develop conclusions for the NRC staff's safety evaluation.

4.0 INFORMATION AND OTHER MATERIAL NECESSARY FOR THE REGULATORY AUDIT

The NRC staff requests that the licensee make the following information readily available and accessible for the NRC staff's review via an internet-based portal:

- Calculation CALC-22-E-0001-11, "ANO-1 TS 3.4.4 LAR Support – RPS Pump-to-Power Monitor Setpoint" (Reference 7 in proposed change to TS Bases document page B 3.3.1-21).
- Any other documentation that was used to support the conclusions derived in CALC-22-E-0001-11.
- Information to support the current TS allowable value of \leq 55 percent RTP, including a summary description of the setpoint methodology, setpoint uncertainty calculation, and margin.

Based on the review of the above documents, the NRC staff will determine whether any additional documents will need to be made available on the portal or whether additional information needs to be submitted on the docket for the staff to complete its review of the proposed changes.

5.0 TEAM ASSIGNMENTS

The audit team will consist of the following NRC staff:

- Santosh Bhatt, Nuclear Engineer
- Calvin Cheung, Electronics Engineer
- Thomas Wengert, Project Manager

6.0 LOGISTICS

The audit will be conducted from February 13, 2023, through March 31, 2023, through an online portal (also known as electronic portal, ePortal, or electronic reading room) established by Entergy.

If requested, the audit team will conduct a telephone conference with the licensee for the purposes of introducing the team, discussing the scope of the audit, and describing the information to be made available on the internet portal. The audit team will also confirm with the licensee if the information made available on the online portal contains any sensitive or proprietary information. The audit team expects to request that representatives of Entergy answer audit team questions during the audit related to information provided on the portal at a mutually agreeable day and time by telephone conference. An exit meeting/call will be held at the conclusion of the audit.

The NRC staff does not foresee the need for an onsite visit or in-person discussions between the NRC and licensee staff to discuss information to be provided on the portal at this time. However, if the need for a such a meeting is identified in the future, the audit plan will be revised, and the schedule for the audit will be adjusted accordingly. The NRC project manager will coordinate any changes to the audit schedule and location with the licensee.

7.0 SPECIAL REQUESTS

The audit team would like access to the documents listed in section 4.0 above through an online portal that allows the audit team to access documents via the internet. The following conditions associated with the online portal must be maintained throughout the duration that the audit team has access to the online portal:

- The online portal will be password-protected, and separate passwords will be assigned to the NRC staff and contractors who are participating in the audit.
- The online portal will be sufficiently secure to prevent the NRC staff from printing, saving, downloading, or collecting any information on the online portal.
- Conditions of use of the online portal will be displayed on the login screen and will require acknowledgement by each user.

Username and password information should be provided directly to the NRC staff and contractors. The NRC project manager will provide to Entergy the names and contact information of the NRC staff who will be participating in the audit. All other communications should be coordinated through the NRC project manager.

8.0 DELIVERABLES

An audit summary will be prepared within 90 days of the completion of the audit. If the NRC staff identifies information during the audit that is needed to support its regulatory decision, the NRC staff will issue requests for additional information to the licensee.

SUBJECT: ARKANSAS NUCLEAR ONE, UNIT 1 - AUDIT PLAN TO SUPPORT REVIEW OF LICENSE AMENDMENT REQUEST TO REMOVE TECHNICAL SPECIFICATION CONDITION ALLOWING TWO REACTOR COOLANT PUMP OPERATION (EPID L-2022-LLA-0161) DATED JANUARY 27, 2023

DISTRIBUTION:

PUBLIC

PM File Copy

RidsACRS_MailCTR Resource

RidsNrrDorlLpl4 Resource

RidsNrrDssSnsb Resource

RidsNrrDexEicb Resource

RidsNrrLAPBlechman Resource

RidsNrrPMANO Resource

RidsRgn4MailCenter Resource

SBhatt, NRR

CCheung, NRR

WOrders, NRR

ADAMS Accession No. ML23020A936

***by e-mail**

OFFICE	NRR/DORL/LPL4/PM*	NRR/DORL/LPL4/LA*	NRR/DSS/SNSB/BC(A)*
NAME	TWengert	PBlechman	DWoodyatt
DATE	1/20/2023	1/23/2023	1/26/2023
OFFICE	NRR/DEX/EICB/BC*	NRR/DORL/LPL4/BC*	NRR/DORL/LPL4/PM*
NAME	MWaters	JDixon-Herrity	TWengert
DATE	1/26/2023	1/27/2023	1/27/2023

OFFICIAL RECORD COPY